08CL07494

Claims

IN THE CLAIMS

1. (previously presented) A method of preparing a dialkyl carbonate, comprising:

reacting an alkanol, oxygen, carbon monoxide, and a catalyst to form a mixture comprising a dialkyl carbonate, an alkyl chloroformate, hydrochloric acid, water, carbon dioxide, and carbon monoxide; and

removing said alkyl chloroformate from said mixture by passing said mixture through a fluid passageway at a temperature of about 30°C to about 130°C and for a residence time of about 0.5 hour to about 10 hours.

- 2. (original) The method of Claim 1, wherein said alkanol comprises a C_1 - C_{12} alkanol.
- 3. (original) The method of Claim 1, wherein said alkanol comprises a C_1 - C_6 primary alkanol.
 - 4. (original) The method of Claim 1, wherein said alkanol comprises methanol.
- 5. (previously presented) The method of Claim 1, wherein said alkanol, said oxygen, and said carbon monoxide are reacted in a molar ratio of (about 0.5 to about 0.7 alkanol):(about 0.04 to about 0.06 oxygen):(about 0.8 to about 1.2 carbon monoxide).
- 6. (original) The method of Claim 1, wherein said catalyst comprises a metal selected from the group consisting of iron, copper, nickel, cobalt, zinc, ruthenium, rhodium, palladium, silver, cadmium, rhenium, osmium, iridium, platinum, gold, mercury, and combinations comprising at least one of the foregoing metals.
 - 7. (original) The method of Claim 1, wherein said catalyst comprises copper.
 - 8. (original) The method of Claim 1, wherein said catalyst comprises hydrochloric acid.
- 9. (original) The method of Claim 1, wherein said catalyst comprises hydrochloric acid and copper in a molar ratio of about 0.5 to about 1.5.

- 10. (original) The method of Claim 1, wherein said fluid passageway comprises a heat exchanger.
- 11. (original) The method of Claim 1, wherein said fluid passageway comprises a holding vessel.
- 12. (original) The method of Claim 1, wherein said fluid passageway comprises a plurality of holding vessels.
- 13. (original) The method of Claim 1, wherein said fluid passageway comprises a section having a length to volume ratio of at least about 5.
- 14. (original) The method of Claim 13, wherein passing said mixture through a fluid passageway comprises passing said mixture through at least one section having a length to volume ratio of at least about 5 for at least about 50% of the total residence time spent in said fluid passageway.
- 15. (previously presented) The method of Claim 1, further comprising fully condensing said mixture prior to passing said reaction mixture through said fluid passageway.
- 16. (original) The method of Claim 1, further comprising removing hydrochloric acid from said mixture.
- 17. (original) The method of Claim 16, wherein said removing hydrochloric acid comprises reducing the concentration of said hydrochloric acid to less than about 1x10⁻³ moles per liter.
- 18. (original) The method of Claim 16, further comprising vaporizing said mixture before said removing hydrochloric acid.
- 19. (original) The method of Claim 18, wherein said vaporizing said mixture comprises heating said mixture, reducing the pressure applied to said mixture, or both.

- 20. (original) The method of Claim 1, further comprising removing carbon dioxide and carbon monoxide from said mixture.
- 21. (original) The method of Claim 20, wherein at least about 90% of said carbon dioxide and at least about 90% of said carbon monoxide are removed from said mixture.
- 22. (original) The method of Claim 20, wherein said removing carbon dioxide and carbon monoxide comprises passing said mixture through a plurality of gas-liquid separation vessels.
- 23. (original) The method of Claim 22, wherein said reacting is conducted at a first pressure, and said plurality of gas-liquid separation vessels comprises a first gas-liquid separation vessel having a pressure within about 10% of said first pressure, and a second gas-liquid separation vessel having a pressure less than about 20% of said first pressure.

24.-34. canceled

CLAIMS

Please add new claim 35:

35. (New) A polycarbonate produced by the reaction of a diaryl carbonate with dihydric phenol wherein the diaryl carbonate is produced by the reaction of an aryl hydroxide with the dialkyl carbonate produced by the method of Claim 1.